REFRIGERATOR MANUFACTURER

Turbo air

Turbo Air Speed up the Pace of Innovation

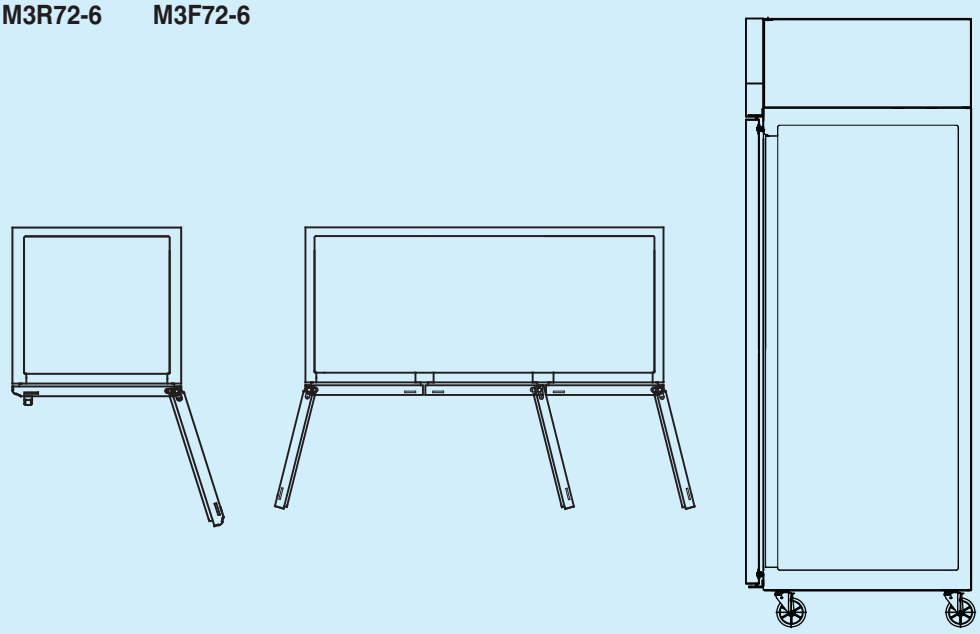
CAUTION!
PLEASE KEEP POWER
SWITCH ON BEFORE
OPERATING THIS EQUIPMENT

Commercial Refrigerator & Freezer Service Manual

Please read this manual completely before attempting to install or operate this equipment!

M3 Series
SOLID DOOR / GLASS DOOR

M3R24-1	**M3F24-1**
M3R47-2	**M3F47-2**
M3R72-3	**M3F72-3**
M3R24-2	**M3F24-2**
M3R47-4	**M3F47-4**
M3R72-6	**M3F72-6**



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7-5. CONDENSER UNIT

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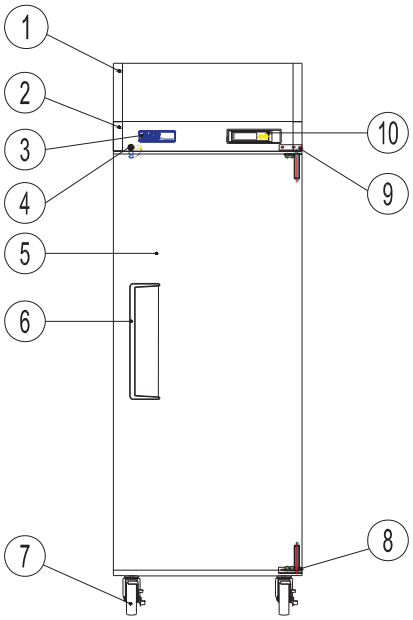
1.FEATURE CHART

1-1.FRONT VIEW/PLAN VIEW (1DOOR)

MODEL: M3R24-1 M3F24-1

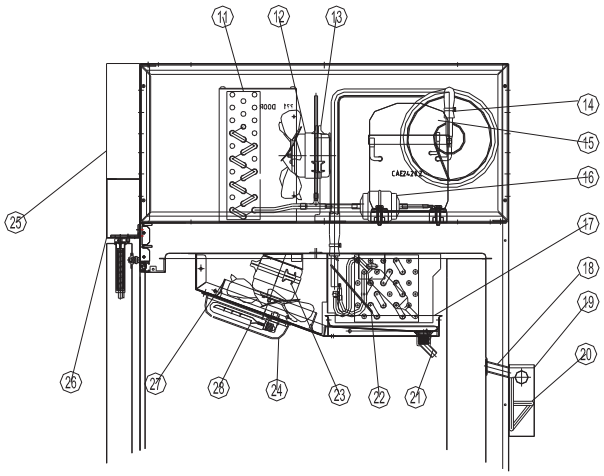
FRONT VIEW



1 TOP GRILLE(T)
2 TOP GRILLE(B)
3 MASCOT
4 KEY
5 ASS'Y DOOR
6 DOOR HANDLE
7 CASTER
8 BOTTOM HINGE
9 TOP HINGE
10 FRONT PCB CASE
11 CONDENSER
12 CONDENSER MOTOR
13 MOTOR BRACKET
14 SUCTION PIPE
15 COMPRESSER

MODEL: M3R24-1 M3R24-2

PLAN VIEW

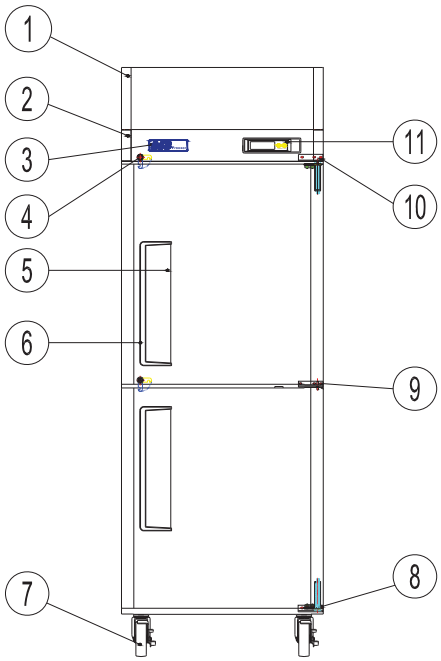


16 DRYER
17 DRAIN PAN
18 DRAIN GUIDE
19 DRAIN CASE
20 DRAIN PIPE
21 DRAIN CONNECTOR
22 EVAPORATOR
23 EVAPORATOR MOTOR
24 LAMP COVER
25 TOP GRILE T
26 TOP GRILE B
27 EVAPORATOR COVER
28 LAMP

FEATURE CHART

MODEL: M3R24-2 M3F24-2

FRONT VIEW



1 TOP GRILLE(T)
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4 KEY
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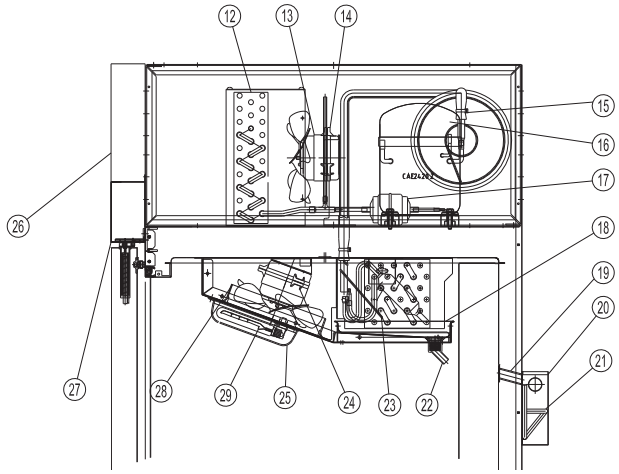
9 MIDDLE HINGE
10 TOP HINGE
11 FRONT PCB CASE
12 CONDENSER
13 CONDENSER MOTOR
14 MOTOR BRACKET
15 SUCTION PIPE
16 COMPRESSER

MODEL: M3R24-1 M3R24-2

PLAN VIEW



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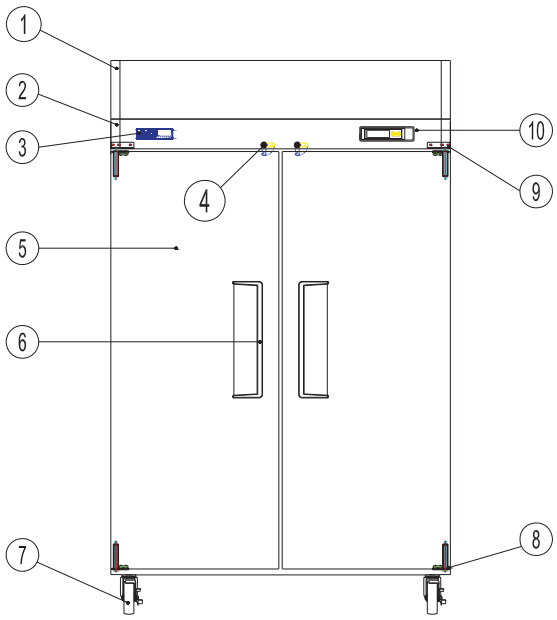
26 TOP GRILE T
27TOP GRILE B
28EVAPORATOR COVER
29 LAMP

1-2.FRONT VIEW/PLAN VIEW (2DOOR)

MODEL: M3R47-2 M3F47-2

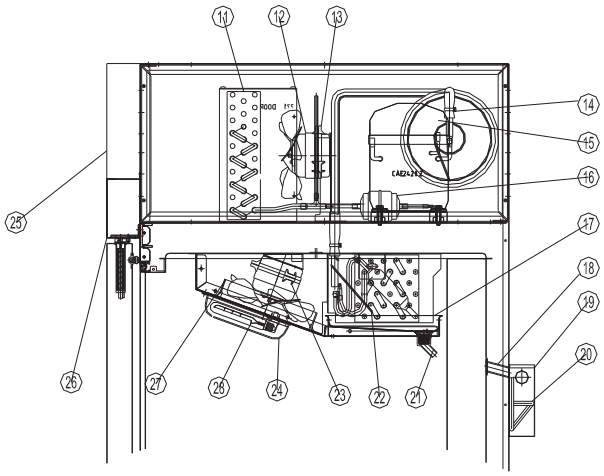
FRONT VIEW



1 TOP GRILLE(T)
2 TOP GRILLE(B)
3 MASCOT
4 KEY
5 ASS'Y DOOR
6 DOOR HANDLE
7 CASTER
8 BOTTOM HINGE
9 TOP HINGE
10 FRONT PCB CASE
11 CONDENSER
12 CONDENSER MOTOR
13 MOTOR BRACKET
14 SUCTION PIPE
15 COMPRESSER

MODEL: M3R47-2 M3R47-4

PLAN VIEW



16 DRYER
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23 EVAPORATOR MOTOR
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25 TOP GRILE T
26 TOP GRILE B
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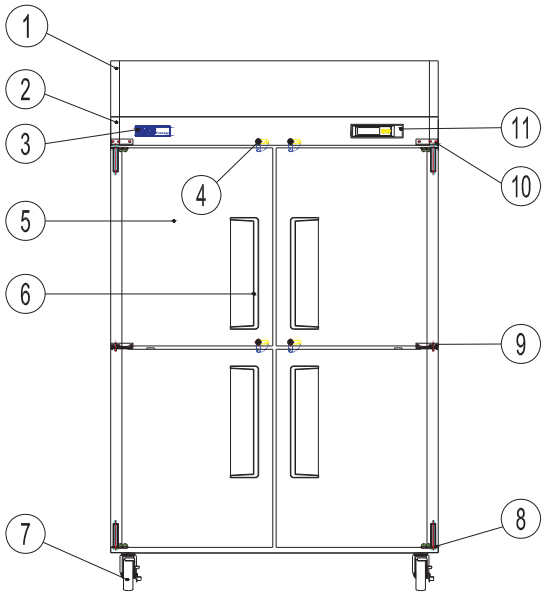
28 LAMP

FEATURE CHART

MODEL: M3R47-4 M3F47-4

FRONT VIEW



1 TOP GRILLE(T)
2 TOP GRILLE(B)
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9 MIDDLE HINGE
10 TOP HINGE
11 FRONT PCB CASE
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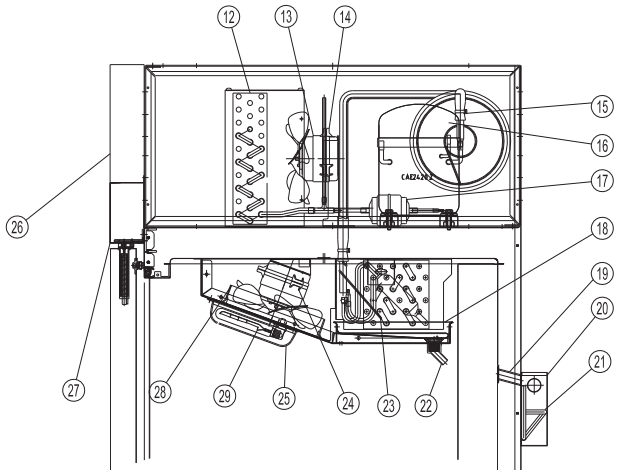
13 CONDENSER MOTOR
14 MOTOR BRACKET
15 SUCTION PIPE
16 COMPRESSER

MODEL: M3F47-2 M3F47-4

PLAN VIEW



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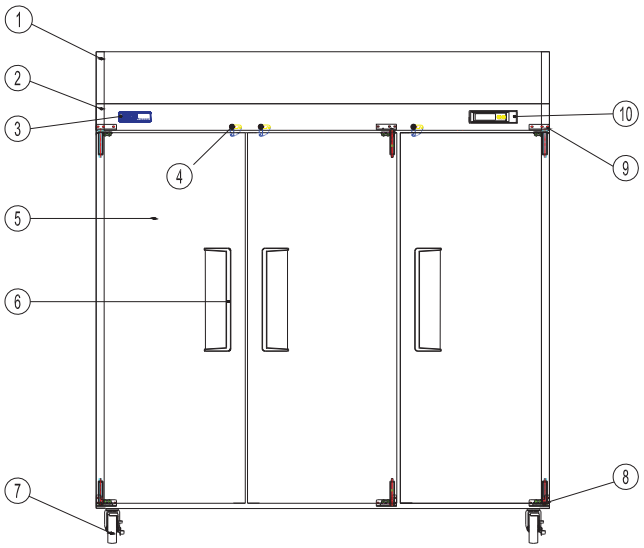
25 LAMP COVER
26 TOP GRILE T
27TOP GRILE B
28EVAPORATOR COVER
29 LAMP

1-3.FRONT VIEW/PLAN VIEW (3DOOR)

MODEL: M3R72-3 M3F72-3

FRONT VIEW



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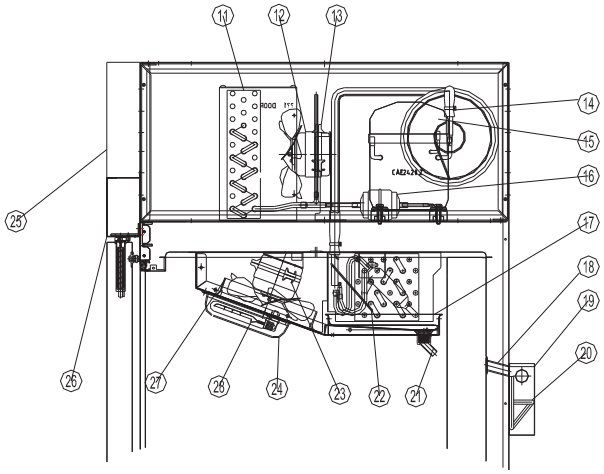
13 MOTOR BRACKET
14 SUCTION PIPE
15 COMPRESSER

MODEL: M3R72-3 M3R72-6

PLAN VIEW



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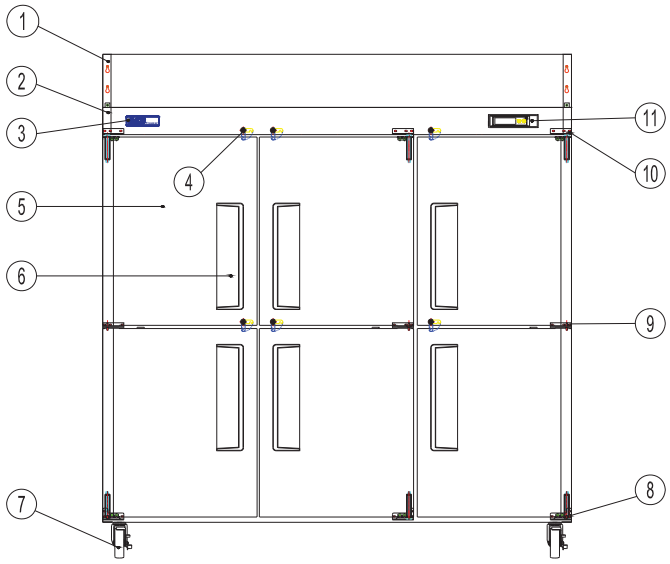
28 LAMP

FEATURE CHART

MODEL: M3R72-6 M3F72-6

FRONT VIEW



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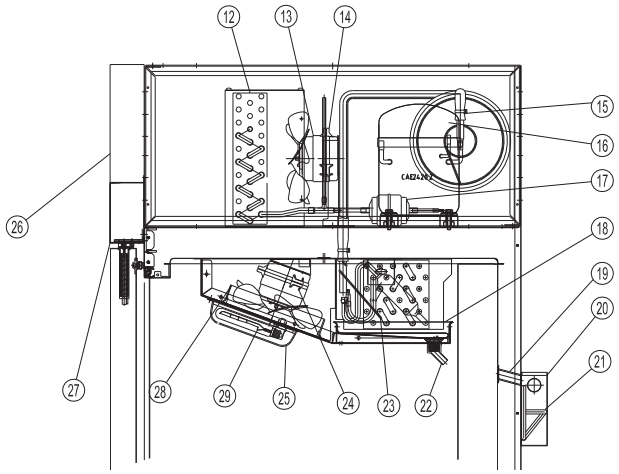
13 CONDENSER MOTOR
14 MOTOR BRACKET
15 SUCTION PIPE
16 COMPRESSER

MODEL: M3F47-2 M3F47-4

PLAN VIEW



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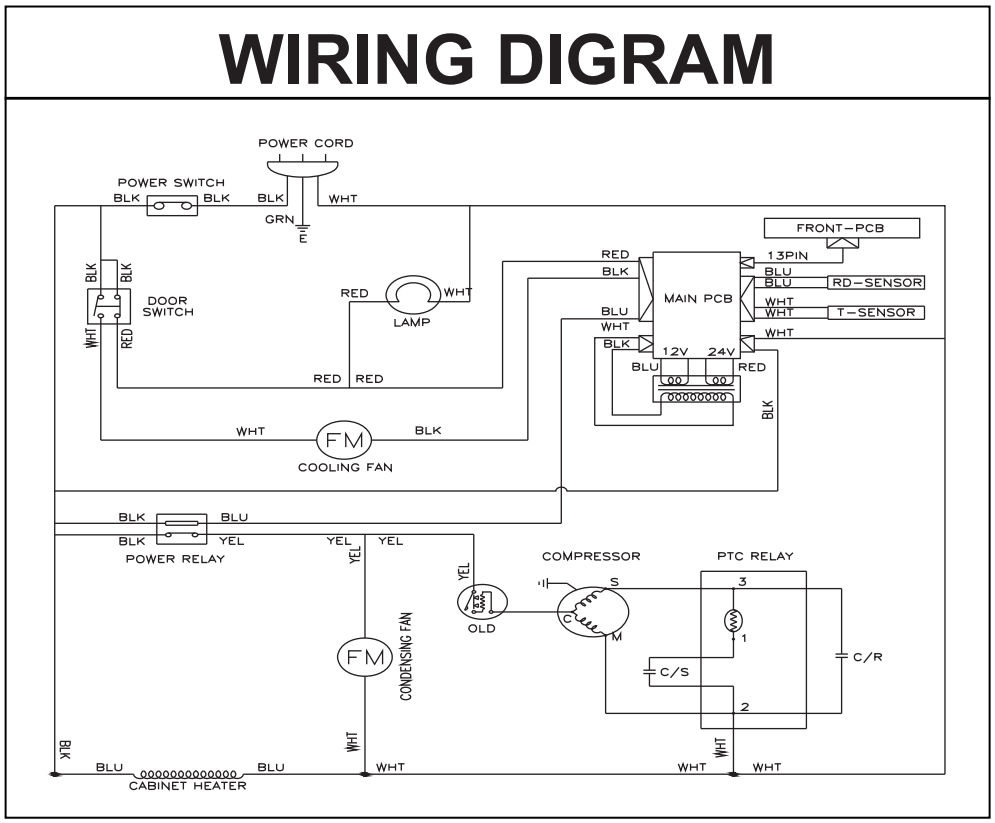
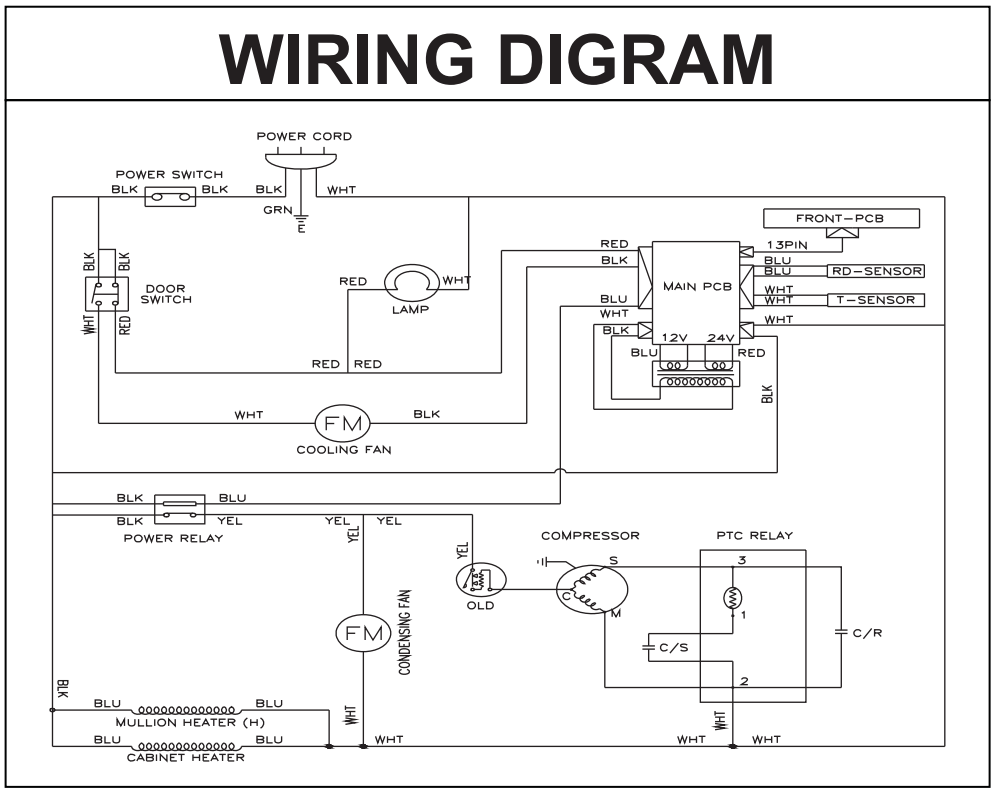
29 LAMP

2.WIRING DIAGRAMS

2-1. M3R24-1

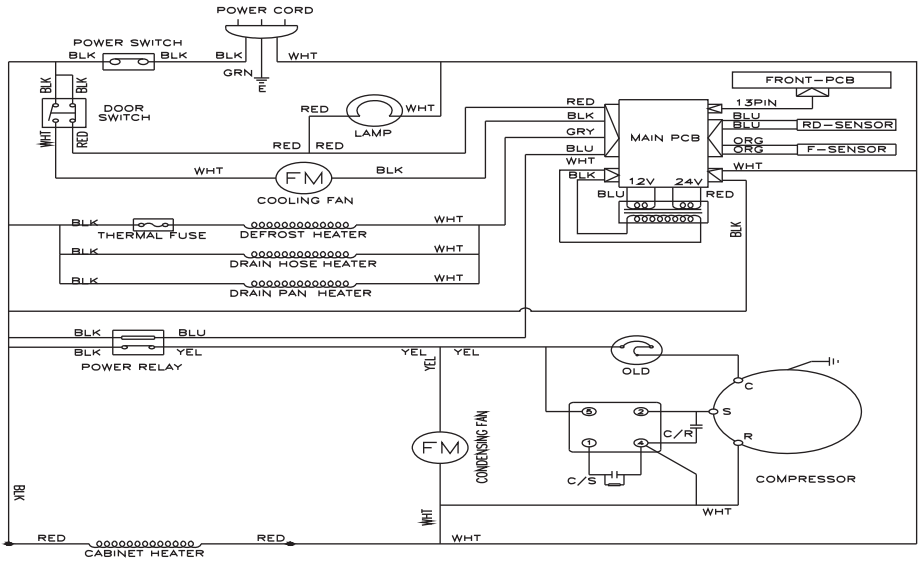


2-2. M3R24-2



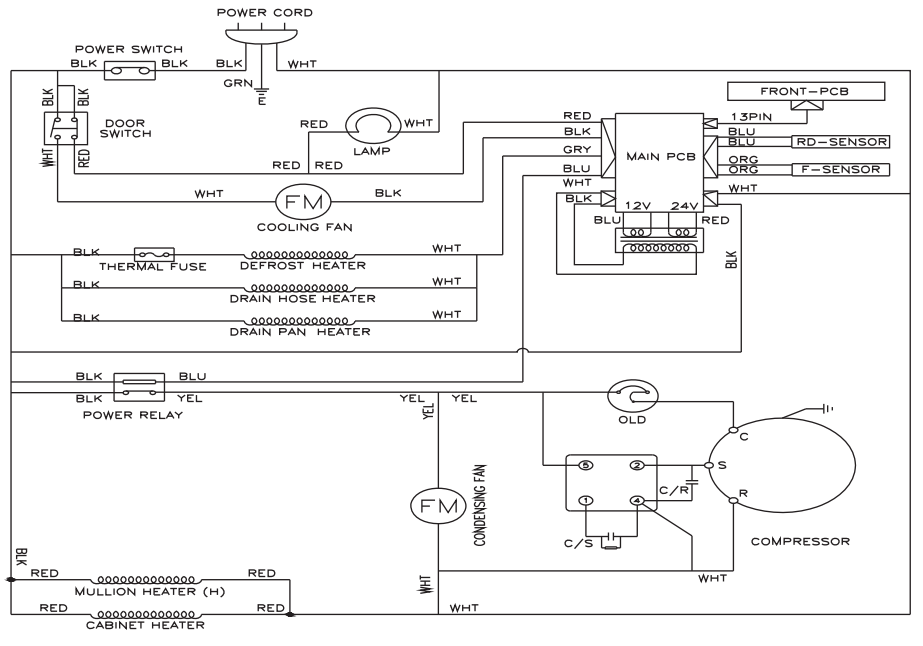
2-3. M3F24-1

WIRING DIGRAM

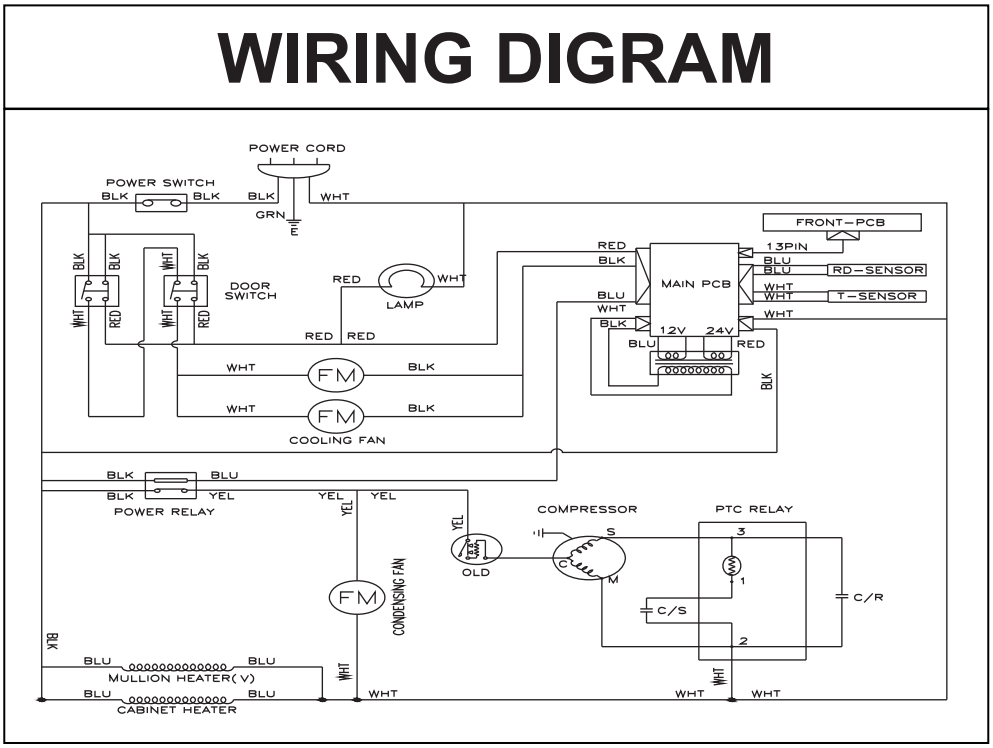


2-4. M3F24-2

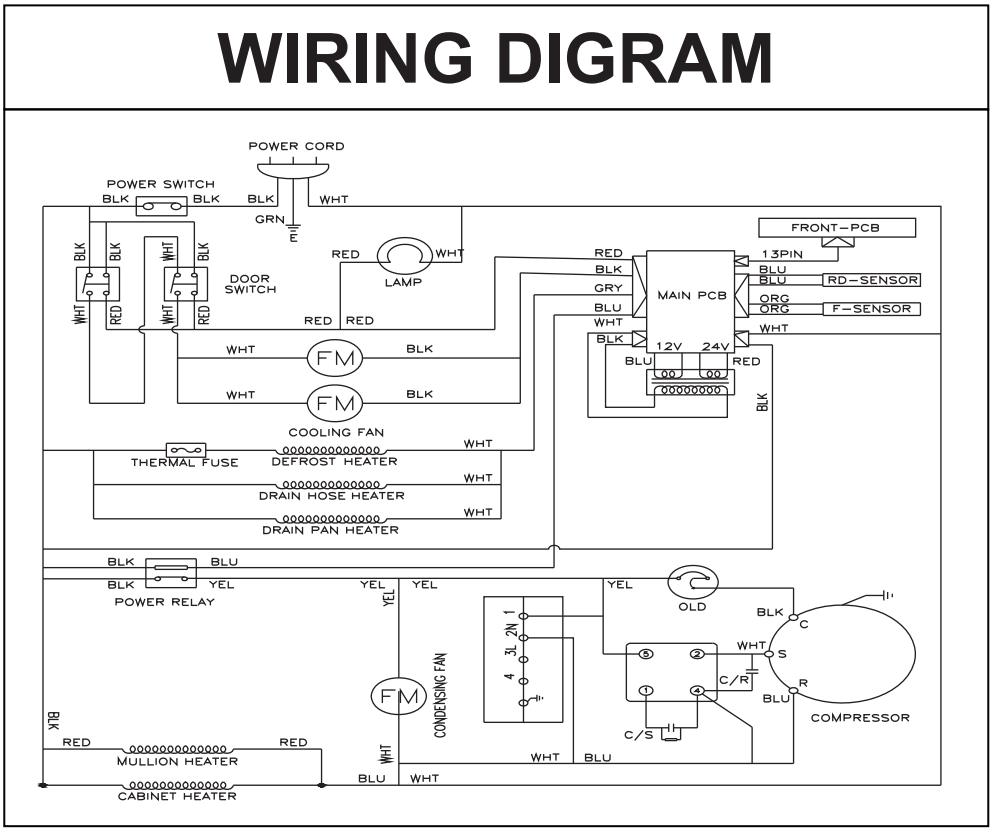
WIRING DIGRAM



2-5. M3R47-2/4

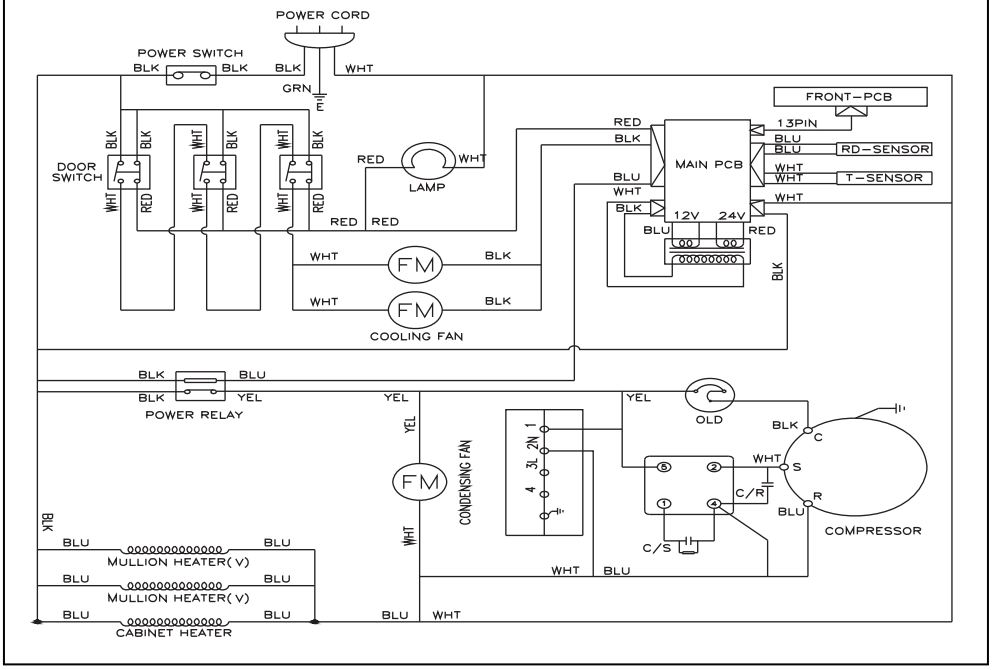


2-6. M3F47-2/4



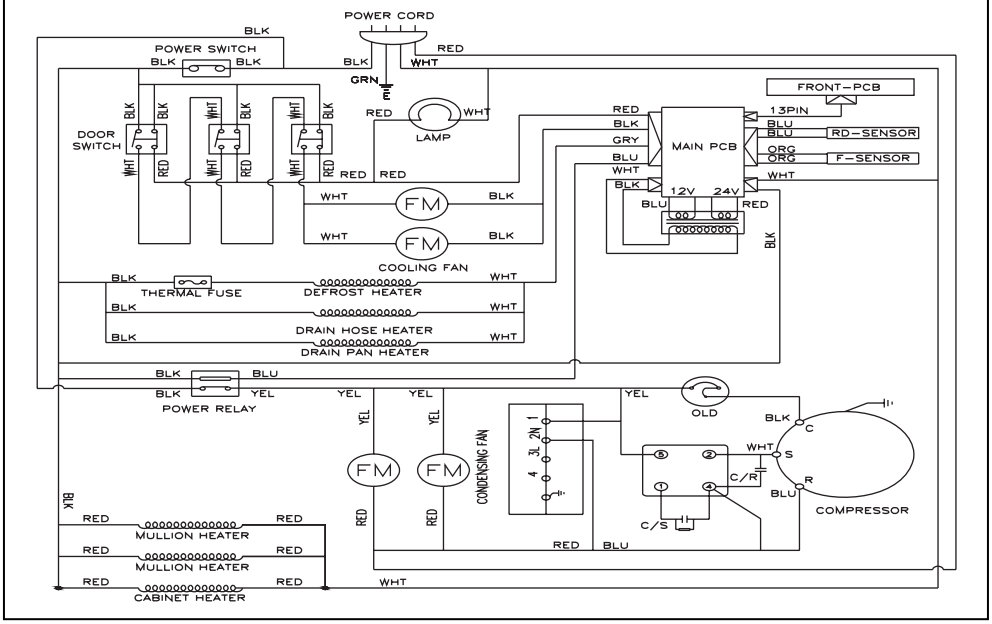
2-7. M3R72-3/6

WIRING DIGRAM



2-8. M3F72-3/6

WIRING DIGRAM

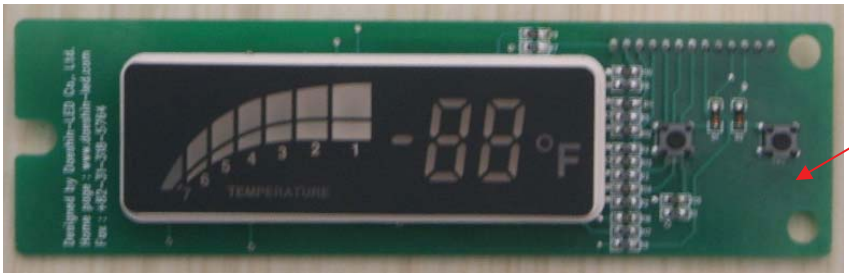


3.PART DETAIL

3-1.TOP GRILLE

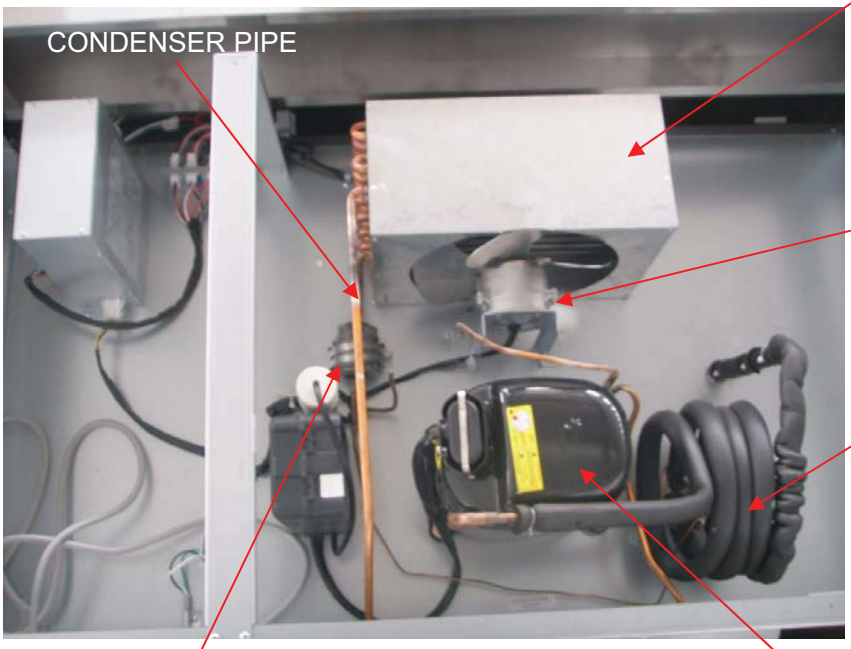
TOP GRILLE (T), TOP GRILLE (B)

DISPLAY P.C.B



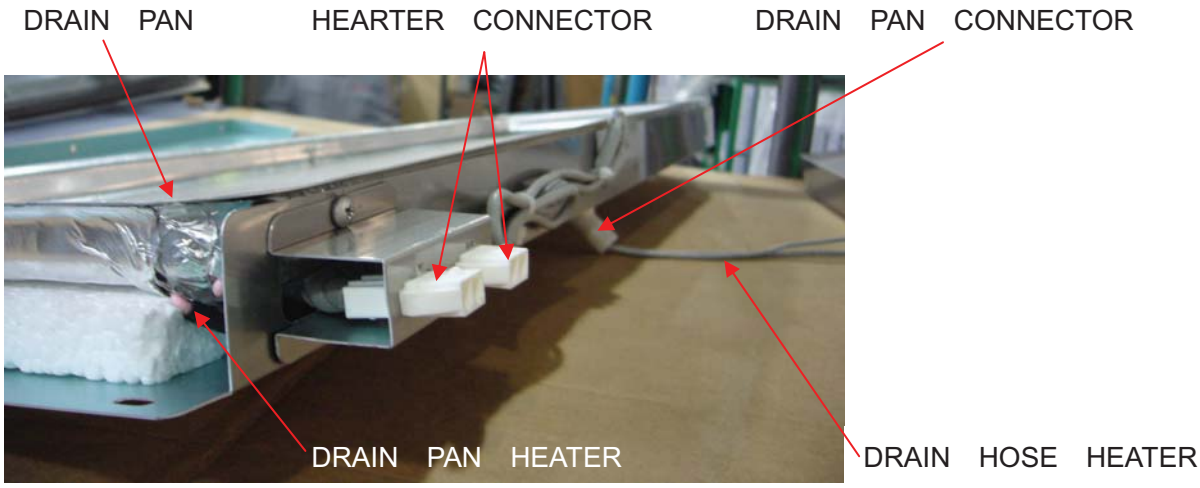
3-2.Refrigeration Compartment

Cycle Assembly

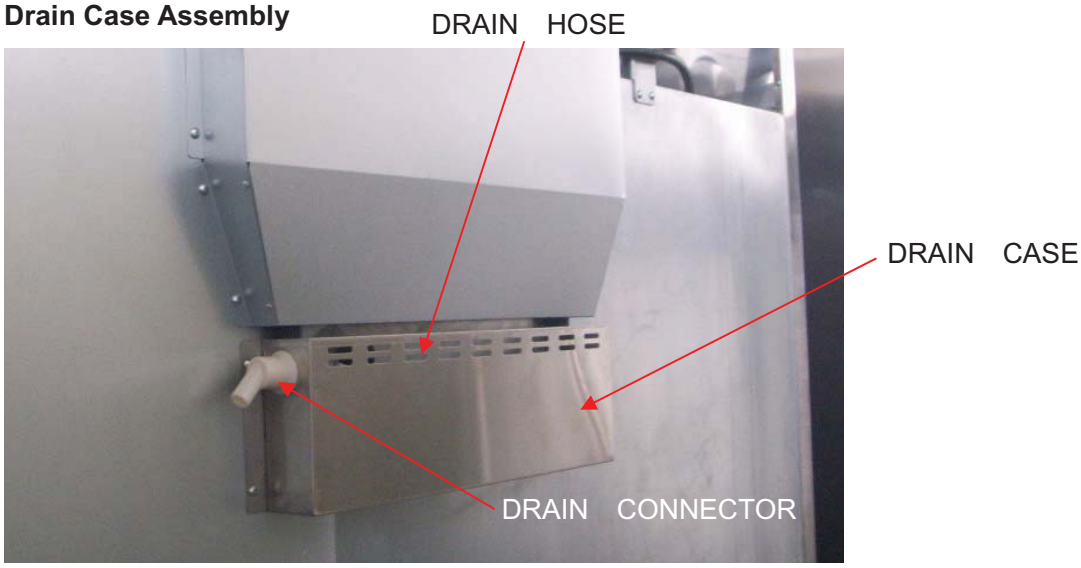


PART DETAIL

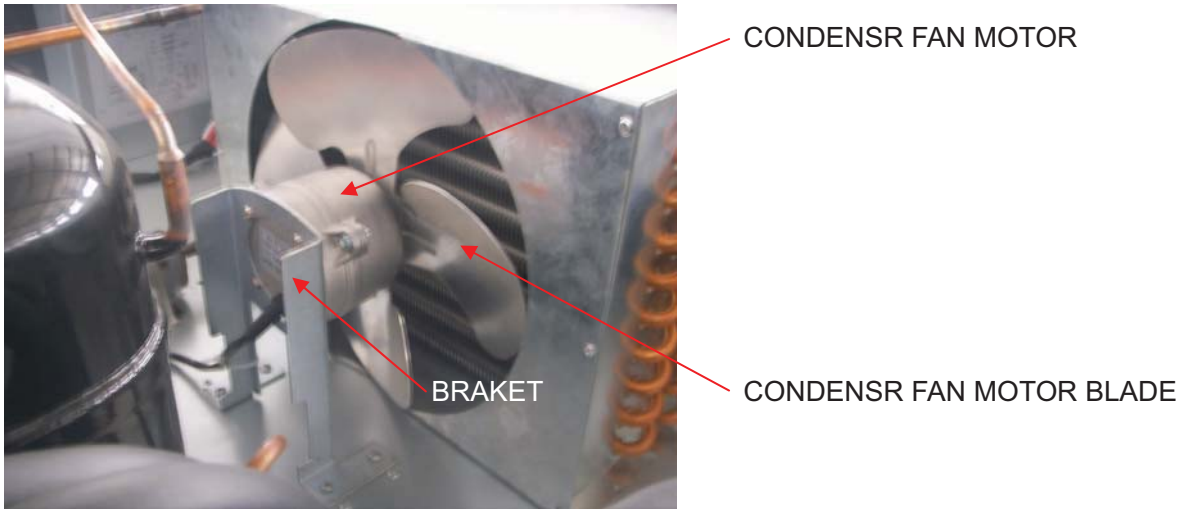
Drain Pan Assembly



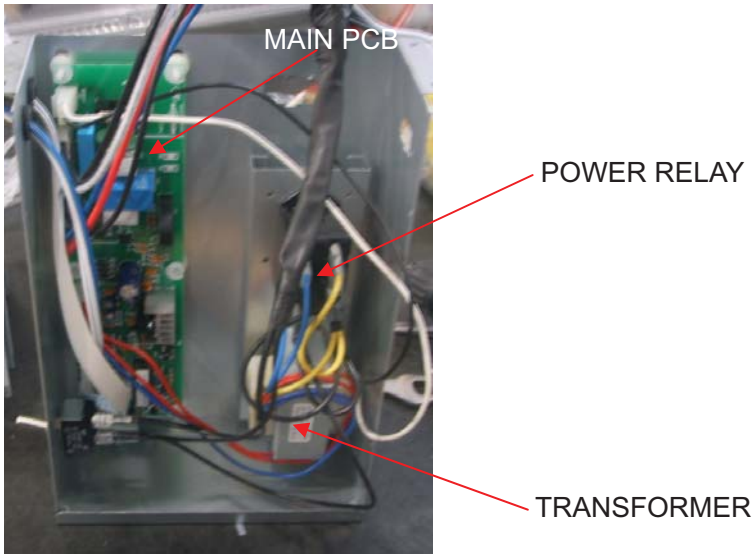
Drain Case Assembly



Condenser Fan Motor Assembly

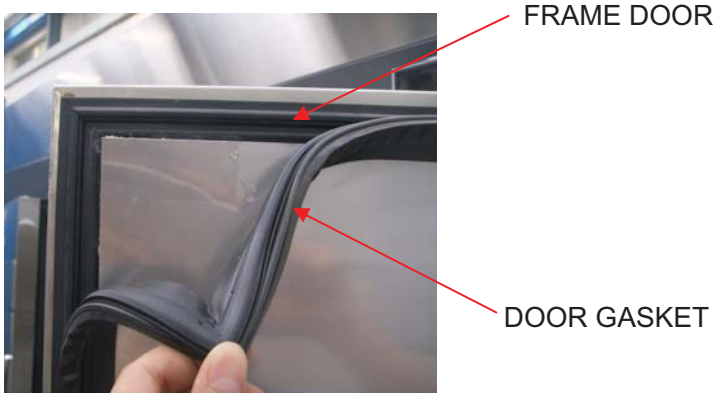


3-3.CONTROL BOX



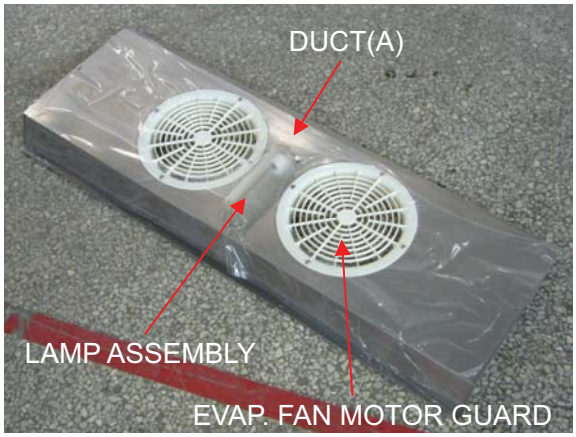
3-4.Door

Gesket



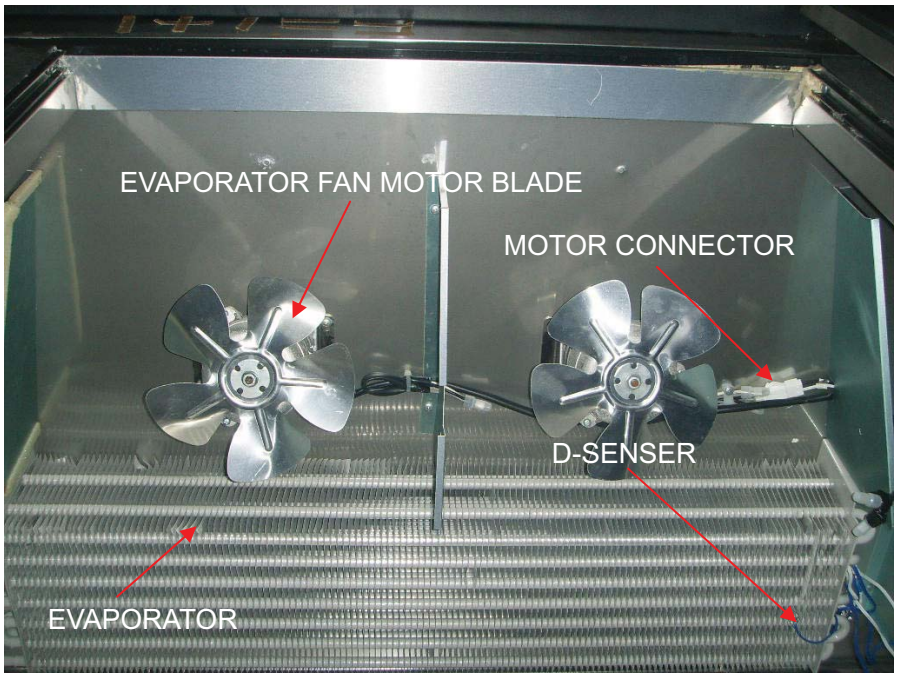
3-5.Cooling Compartment

Freezer Duct & Refrigerator Duct (M3R72-3/6,M3F72-3/6,M3R47-2/4,M3F47-2/4)

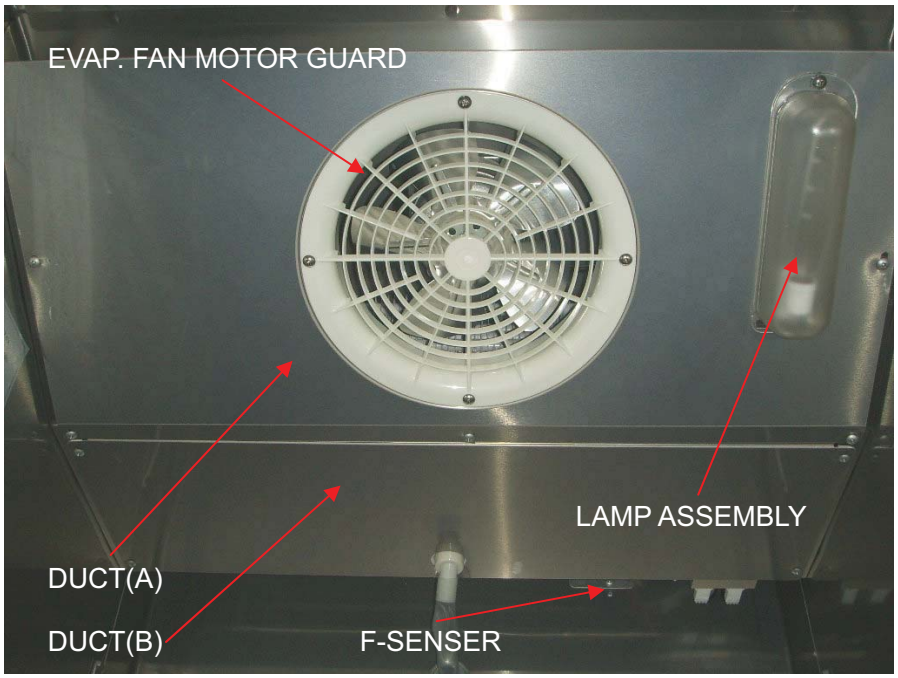


PART DETAIL

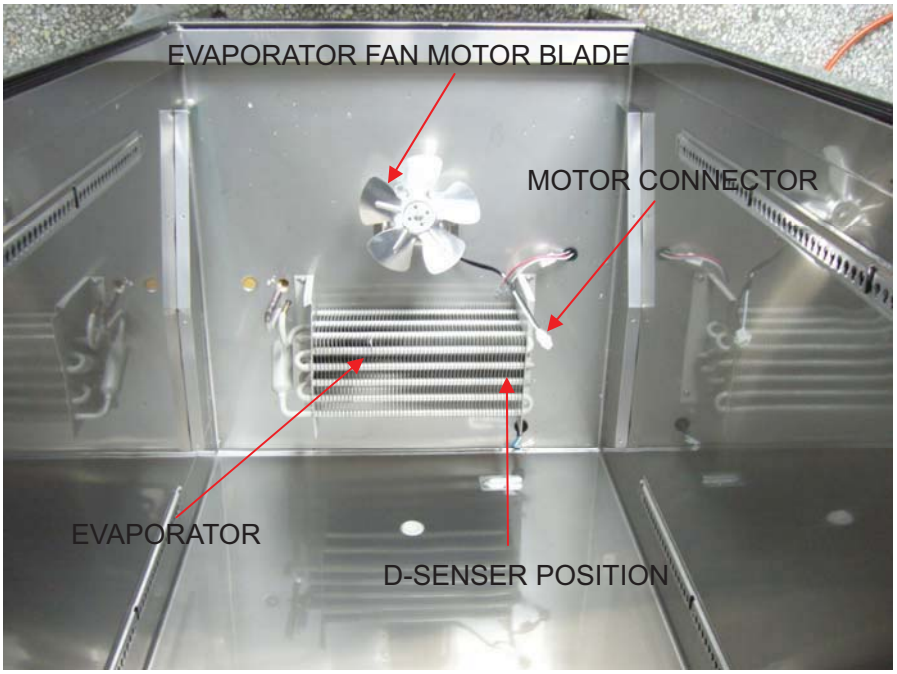
Freezer EVAP.,Fan(M3R47-2/4,M3F47-2/4)



Freezer Duct & Refrigerator Duct (M3R24-1/2,M3F24-1/2)



Freezer EVAP.,Fan(M3R24-1/2,M3F24-1/2)



MAIN COMPONENTS

4-1.COMPRESSOR

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Refrigerant	R-134a	R-404a	R-134a	R-404a	R-134a	R-404a
Voltage	115V	115V	115V	115V	115V	115V/208-230V
Comp. model	HBL27YE-1	CAJ 2420Z	SK1A1C-L2W	CAJ2432Z	CAJ4476Y	CAJ2446Z
Part code	G2F5700100	G2F5700100	P2R5700100	P2R5700100	P5F5700100	P8R5700100
Starting Type	CSR	CSR	CSR	CSR	CSR	CSR

4-2.COMPRESSOR RELAY

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	25A,120V(GEN)					
Relay Model	UZ-2A-BT110					

4-3.CONDENSER DRYER

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Refrigerant	R-134a	R-404a	R-134a	R-404a	R-134a	R-404a
Spec.	C-052-5	C-052-5	C-052-5	C-052-5	C-052-5	C-052-5
Part code	P994100100					

4-4.CAPACITOR

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage						
Running	230V/10 μF		250V/12 μF	4OOV A 450V B 500V C / 30 μF		4OOV A 450V B 500V C / 30 μF
Part code						
Starting	200V/100 μF	160V/51 μF	125V/125 μF	160V/51 μF	160V/250 μF	160V/250 μF
Part code						

4-5.EVA FAN MOTOR

Model	M3R24-1 M3R24-2	M3R47-2 M3R47-4	M3F24-1 M3F24-2	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	115V/ 60Hz					
Motor Model.	IS-4420DWSN-2A					
Part code	G8F6600100					

4-6.CONDENSOR FAN MOTOR

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	115V/ 60Hz					
Motor Model.	IS-4420DWSN-2A					
Part code	G8F6600100					

4-7.EVA DEFROST HEATER

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	X	115V	X	115V	X	115V
Spec..	X	445W	X	600W	X	900W
Part code	X	P2F5300300	X	P5F5300200	X	P8F5300500

4-8.LAMP BULB

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	115V					
Spec..	40W					
Part code	P996300100					

4-9.TRANSFORMER

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	115V, 60Hz					
Spec..	DWS-115U					
Part code						

4-10.MAIN PCB

Model	M3R24-1 M3R24-2	M3F24-1 M3F24-2	M3R47-2 M3R47-4	M3F47-2 M3F47-4	M3R72-3 M3R72-6	M3F72-3 M3F72-6
Voltage	12V/24V					
Spec..						
Part code						

5. ELECTRONIC CONTROLLER INSTRUTION

5-1.FREEZER CONTROLLER

HOW TO USE THE PANEL

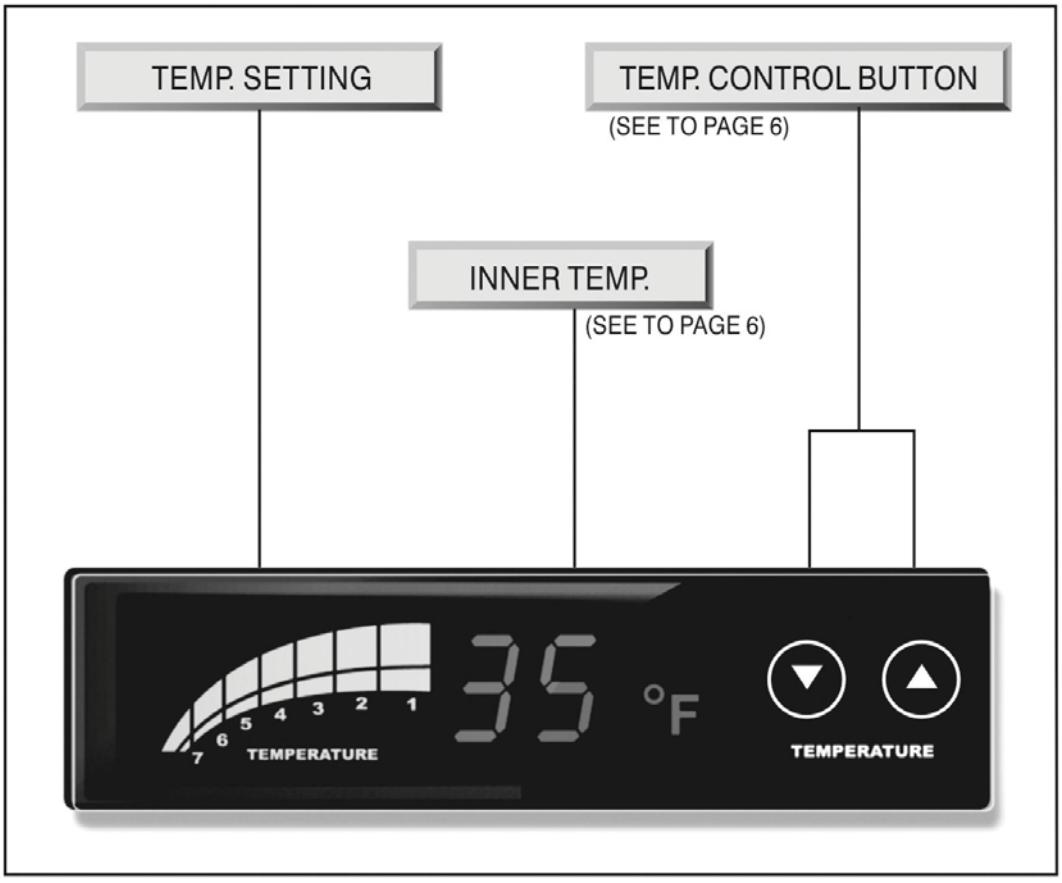
BASIC OPERATION

M3R24-1 , M3R24-2
M3R47-2 , M3R47-4
M3R72-3 , M3R72-6

REFRIGERATORS

1. Plug in and turn on the power switch located on the control box .
   The Display panel will be lighted and make a beep sound. The compressor will begin to run.
2. The default temperature setting is No. "4" .
3. The compressor is automatically cycled by the electronic controller (PCB, RD-Sensor).
4. The Defrost cycle is automatically controlled by the PCB.
5. Set level toward "1" for higher temperature and toward "7" for lower temperature.
6. The interior light is activated by the rocker switch at the bottom of the grille when the door is opened.
7. Evaporator fan motor(s) will run after all doors are completely closed.

DISPLAY PANEL OF REFRIGERATOR



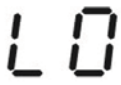
ELECTRONIC CONTROLLER INSTRUCTION

UP/DOWN BUTTON (Temperature control button)

1. By pushing the up/down button, you can set the inside temperature level from ' 1 ' to '7'.
2. If you want lower temperature, push the Down button to be lighted higher level numbers.

INNER TEMPERATURE DISPLAY

1. It displays the inside temperature.
2. Display range is 14˚F to 69 ˚F(-10℃ ~ +20℃).
3. When the inside temperature is lower than 14˚F, the panel will display ' LO '.



and, higher than 69˚F, the panel will display ' HI '.

FAN RUNNING

1. Evaporator fan motor is activated when the door (both doors for M3R47–2、M3R47–4, all three doors for M3R72–3、M3R72–6) is closed.

5-2.FREEZER CONTROLLER

HOW TO USE THE PANEL

BASIC OPERATION

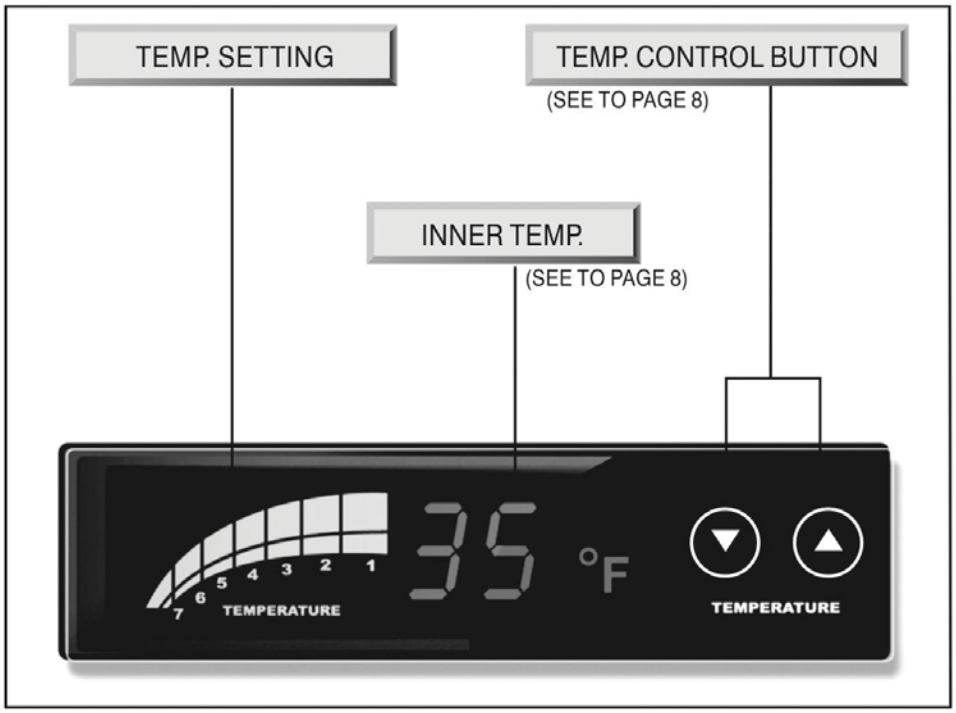
M3F24-1 , M3F24-2
M3F47-2 , M3F47-4
M3F72-3 , M3F72-6

FREEZERS

1. Plug in and turn on the power switch located on the bottom of the top grille right side. The Display panel will be lighted and make a beep sound. The compressor will begin to run.
2. The default temperature setting is No. “4”.
3. The compressor is automatically cycled by the electronic controller (PCB, F-Sensor).
4. The Defrost cycle is automatically controlled by the RD-sensor, and the PCB.
5. Set level toward “1” for higher temperatures and toward “7” for lower temperatures.
6. The interior light is activated by the rocker switch at the bottom of the grille when the door is opened.
7. Evaporator fan motor(s) will run after all doors are completely closed.
8. Good Air Flow in freezer unit is critical.

   Be careful to load product so that it neither presses against the back wall, nor reaches within four inches from the evaporator compartment.

DISPLAY PANEL OF FREEZER



MANUAL DEFROST

1. Press the down (▼) button 5 times while pressing up (▲) button,the Defrost will start.
2. During the Manual Defrost mode,the Up/Down button for the temp, control can not make the compressor cycle ON or OFF.

UP/DOWN BUTTON (Temperature control button)

1. By pushing the up/down button, you can set the inside temperature level from '1' to '7'.
2. If you want lower temperatures, push the Down button to be lighted higher level numbers.

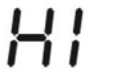
DEFROST

1. The electronic defrost controller is set at the factory to provide a defrost cycle every 6 hours (4 times per a day).
2. If it is necessary to change the intervals of defrost due to unusual operating conditions, it can be accomplished by adjusting the switch which is located on the inside of the top grille.
3. The panel displays "dF" during the defrost cycle.

INNER TEMPERATURE DISPLAY

1. It displays inside temperature.
2. Display range is –50°F to 50°F (-45°C ~ +10°C).
3. When inside temperature is lower than –50°F,the panel will display 'LO'.

and, higher than +50°F, the panel will show 'HI'.



FAN RUNNING

1. Evaporator fan motor is activated when the door (both doors for M3F47–2、M3F47–4, all three doors for M3F72–3、M3F72–6) is closed.

6.PARTS LIST FOR M3

Part name	Code	Material	Description	Model												Remark
				R24	F24	R24-2	F24-2	R47	F47	R47-4	F47-4	R72	F72	R72-6	F72-6	
Cabinet																
LINER FRAME COVER (L)(R)	P8R3100300	PVC-H		2	2	2	2	2	2	2	2	2	2	2	2	
LINER FRAME COVER (T)(U)	P8R3100200	PVC-H										2	2	2	2	
LINER FRAME COVER (T)(U)	P5R3100300	PVC-H						2	2	2	2					
LINER FRAME COVER (T)(U)	P2R3100500	PVC-H		2	2	2	2									
Control box																
PANNEL FRONT PCB	G8F3200300	ABS		1	1	1	1	1	1	1	1	1	1	1	1	
HARNESS PCB	G2F5100500								1		1					
HARNESS PCB	G5F5100101			1		1		1		1		1		1		
HARNESS PCB	G8R5100201												1		1	
HARNESS PCB	G8F5100901				1		1									
HARNESS SENSOR	G8F51003……p00			1	1	1	1	1	1	1	1	1	1	1	1	
MAIN PCB (F)	G8F5400100				1		1		1		1		1		1	
MAIN PCB (R)	P8R5400100			1		1		1		1		1		1		
MAIN PCB FIXTURE	G8F9200300	NYLON		6	6	6	6	6	6	6	6	6	6	6	6	
POWER RELAY	P995900100			1	1	1	1	1		1		1		1		Same As Super Deluxe
POWER SWITCH	P995200400			1	1	1	1	1	1	1	1	1	1	1	1	
Door																
ASS'Y DOOR (L)	G8F0500200							1	1			1	1			
ASS'Y DOOR (M)	G8F0500300											1	1			
ASS'Y DOOR (R)	G8F0500100							1	1			1	1			
ASS'Y DOOR (R)	G2F0500100			1	1											
ASS'Y DOOR (T)(L)	G8F0500400									1	1			1	1	
ASS'Y DOOR (T)(M)	G2F0500200					1	1									
ASS'Y DOOR (T)(R)	G8F0500500									1	1			1	1	
ASS'Y DOOR (T)(R)	G2F0500300					1	1									
ASS'Y DOOR (U)(L)	G8F0500600									1	1			1	1	
ASS'Y DOOR (U)(M)	G8F0500700													1	1	
ASS'Y DOOR (U)(R)	G2F0500300					1	1									
ASS'Y DOOR (U)(R)	G8F0500900									1	1			1	1	
DOOR GASKET	P8F3300100	PVC-S								1	1			1	1	
DOOR GASKET	P8F3300200	PVC-S						1	1			1	1			
DOOR GASKET	P2R3300100	PVC-S				1	1									
DOOR GASKET	P2R3300200	PVC-S		1	1											
DOOR HANDLE	P993200700			1	1	2	2	2	2	4	4	3	3	6	6	Same As Super Deluxe
PIVOT CASE FIXTURE B/K	P8F2200800	GI		4	4	4	4	8	8	6	6	12	12	4	4	
PIVOT MIDDLE	P8F2900300	ZNDC		2	2	4	4	4	4	6	6	6	6	2	2	
KEY	P998200100			1	1	2	2	2	2	3	3	3	3	1	1	Same As Super Deluxe

PARTS LIST FOR M3

Part name	Code	Material	Description	Model												Remark
				R24	F24	R24-2	F24-2	R47	F47	R47-4	F47-4	R72	F72	R72-6	F72	
vap housing																
DRAIN GUIDE	G2F2700100	AL		1	1	1	1									Same As Super Deluxe
DRAIN GUIDE	G5F2700100	AL						1	1	1	1					Same As Super Deluxe
DRAIN GUIDE	G8F2700100	AL										1	1	1	1	Same As Super Deluxe
DRAIN GUIDE PAD	G2F7300100	F-BS		1	1	1	1									
DRAIN GUIDE PAD	G5F7300100	F-BS						1	1	1	1					
DRAIN GUIDE PAD	G8F7300100	F-BS										1	1	1	1	
DRAIN GUIDE PAD(LOW)	G8F7300200											1		1		
DEFROST HEATER	P2F5300300		115V445W		1		1									Same As Super Deluxe
DEFROST HEATER	P5F5300200		115V600W						1		1					Same As Super Deluxe
DEFROST HEATER	P8F5300500		115V900W										1		1	Same As Super Deluxe
DRAIN HOSE	G8 F3000100			1	1	1	1	1	1	1	1	1	1	1	1	Same As Super Deluxe
DRAIN HOSE HEATER	G8F5300400	PVC	115V10W		1		1		1		1		1		1	Same As Super Deluxe
DRAIN PAN HEATER	G2F5300200	PVC	115V61.2W		1		1									Same As Super Deluxe
DRAIN PAN HEATER	G5F5300200	PVC	115V90W						1		1					Same As Super Deluxe
DRAIN PAN HEATER	G8F5300500	PVC	115V111.1W										1		1	Same As Super Deluxe
F SENSOR	G8F5100800				1		1		1		1		1		1	
FAN BLADE	G8F2700500				1		1		1		1	1		1		Same As Super Deluxe
FAN BLADE	P8F2700300			1		1		1		1			2		2	Same As Super Deluxe
FAN BLADE	P8F2700400			1	1	1	1	2	2	2	2	2	2	2	2	Same As Super Deluxe
MOTOR	G8F6600100			1	1	1	1	1	1	1	1	1		1		Same As Super Deluxe
MOTOR	G8F6600200												2		2	Same As Super Deluxe
TSENSOR	G8R5100400			1		1		1		1		1		1		
THERMAL FUSE	G8F5300600				1		1		1		1		1		1	Same As Super Deluxe
MULLION FRAME (V)	G8F3100100	PVC						2	2			4	4			
MULLION FRAME (V)	G8F3101000	PVC								2	2			4		
MULLION FRAME COVER (V)	G8F3100400	PVC						2	2			4	4			
MULLION HEATER (VER)	P8F5300201	PVC	L=3060						1				2			
MULLION HEATER (VER)	P8R5300201	PVC	L=3060					1				2				
SHELF STANDARD	P8F2700100	AL		4	4	4	4	8	8	8	8	12	12	12	12	Same As Super Deluxe
LAMP	P996300100			1	1	1	1	1	1	1	1	1	1	1	1	
LAMP COVER	G8F3200200			1	1	1	1	1	1	1	1	1	1	1	1	
LAMP SOCKET	P996400100			1	1	1	1	1	1	1	1	1	1	1	1	
SENSOR GUARD	P992000300	AL		1	1	1	1	1	1	1	1	1	1	1	1	Same As Super Deluxe
SHELF	G2F1800101			3	3	3	3									
SHELF	G8F1800101							6	6	6	6	6	6	6	6	
SHELF (M)	G8F1800201											3	3	3	3	

PARTS LIST FOR M3

Part name	Code	Material	Description	Model												Remark
				R24	F24	R24-2	F24-2	R47	F47	R47-4	F47-4	R72	F72	R72-6	F72-6	
SHELF CLIP	P993200800			16	16	16	16	32	32	32	32	48	48	48	48	Same As Super Deluxe
CABINET HEATER	P2F5300101	PVC	L=4800		1		1									Same As Super Deluxe
CABINET HEATER	P2R5300101	PVC	L=5970	1		1										Same As Super Deluxe
CABINET HEATER	P5F5300101	PVC	L=7290						1		1					Same As Super Deluxe
CABINET HEATER	P5R5300101	PVC	L=4800					1		1						Same As Super Deluxe
CABINET HEATER	P8F5300100	PVC	L=5970										1		1	Same As Super Deluxe
CABINET HEATER	P8R5300100	PVC	L=7290									1		1		Same As Super Deluxe
DOOR HANDLE	G993200101	ALDC		1	1	1	1	2	2	2	2	3	3	3	3	Same As Super Deluxe
DOOR SWITCH	P995200100			1	1	1	1	2	2	2	2	3	3	3	3	Same As Super Deluxe
HINGE SPRING (L)	P998400102	SUS304		1	1	1	1	2	2	2	2	3	3	3	3	
HINGE SPRING (R)	P998400202	SUS304		1	1	1	1	2	2	2	2	3	3	3	3	
MASCOT	G8F7400300				1		1		1		1		1		1	
MASCOT	G8R7400300			1		1		1		1		1		1		
MIDDLE HINGE (L)	P992900601	SUS304								1	1			1	1	
MIDDLE HINGE (R)	P992900501	SUS304				1	1			1	1			2	2	
MULLION FRAME (H)	G2F1200101	PVC				2	2									
MULLION FRAME (H)	G8F1200302	PVC								4	4			6	6	
MULLION FRAME COVER	G2F3100100	PVC				2	2									
MULLION FRAME COVER	G8F3100500	PVC								2	2			2	2	
MULLION FRAME COVER	G8F3100600	PVC								2	2			2	2	
MULLION FRAME COVER	G8F3100700	PVC								2	2			4	4	
MULLION FRAME COVER	G8F3100800	PVC								2	2			4	4	
MULLION FRAME COVER	G8F3100900	PVC												2	2	
MULLION HEATER (VER)	P8F5300201	PVC							1				2			
MULLION HEATER (VER)	P8R5300201	PVC						1				2				
TOP GRILLE (T) FIXTURE	P998300200	STS43		2	2	2	2	2	2	2	2	2	2	2	2	
TOP HINGE (L)	P992900204	STS304						1	1	1	1	1	1	1	1	
TOP HINGE (R)	P992900104	STS304		1	1	1	1	1	1	1	1	2	2	2	2	
TRANS FORMER	P996000100			1	1	1	1	1	1	1	1	1	1	1	1	Same As Super Deluxe
TOP GRILLE (T3)	G8F1600100	SUS304-#4										1	1	1	1	
TOP GRILLE(B) BACK COVER	G8F1600201	GI		1	1	1	1	1	1	1	1	1	1	1	1	
TOP GRILLE(T2)	G5F1600100	SUS304-#4						1	1	1	1					
TOP GRILLE(T1)	G2F1600100	SUS304-#4		1	1	1	1									
TOP GRILLE (B)	G2F1100101	GI	BLACK	1	1	1	1									
HARNESS GRILLE DOOR S/W	G2F5100401			1	1	1	1									
TOP GRILLE (B)	G5F1100101	GI	BLACK					1	1	1	1					

PARTS LIST FOR M3

Part name	Code	Material	Description	Model												Remark
				R24	F24	R24-2	F24-2	R47	F47	R47-4	F47-4	R72	F72	R72-6	F72-6	
HARNESS GRILLE DOOR S/W	G5F5100401							1	1	1	1					
TOP GRILLE (B)	G8F1100101	GI	BLACK									1	1	1	1	
TOP GRILLE (B) FIXTURE	G8F1900301	GI		2	2	2	2	3	3	3	3	3	3	3	3	
HARNESS GRILLE DOOR S/W	G8F5100701											1	1	1	1	
TOP GRILLE (T) FIXTURE	P8F1600401	SUS304-2B		2	2	2	2	2	2	2	2	2	2	2	2	
Unit																
TEE	G994200100	CU		1	1	1	1	1	1	1	1	1	1	1	1	
PIPE(COMP-DRAIN)	G2F4200401	CU	Φ9.52X0.6T		1		1									
PIPE(DRAIN-CON)	G2F4200501	CU	Φ9.52X0.6T		1		1									
EVAP COIL	G2F4400101				1		1									Same As Super Deluxe
CONDENSER COIL	G2F4500101				1		1									Same As Super Deluxe
PIPE(COMP-DRAIN)	G2R4200102	CU	ϕ7.94X0.6T	1		1										
PIPE(DRAIN-CON)	G2R4200301	CU	Φ9.52X0.6T	1		1										
EVAP COIL	G2R4400101			1		1										Same As Super Deluxe
CONDENSER COIL	G2R4500101			1		1										Same As Super Deluxe
PIPE(COMP-DRAIN)	G5F4200401	CU	Φ9.52X0.6T						1		1					
EVAP COIL	G5F4400101								1		1					Same As Super Deluxe
PIPE(DRAIN-CON)	G5R4200101		Φ9.52X0.6T					1		1						
PIPE(COMP-DRAIN)	G5R4200201		ϕ7.94X0.6T					1		1						
PIPE(DRYER-CAPI TUBE)	MEGA	CU		1		1		1		1					1	
EVAP COIL	G5R4400101							1		1						Same As Super Deluxe
CONDENSER COIL	G5R4500101							1		1						Same As Super Deluxe
DRAIN PIPE	G8F4200101	CU							1		1		1			
PIPE(COMP-SUC)	G8F4200200	CU	Φ12.7X0.8T						1		1		1			
PIPE(DRAIN-CON)	G8F4200701	CU	Φ9.52X0.6T									1		1		
PIPE(COMP-DRAIN)	G8F4201000	CU	Φ9.52X0.6T		1		1		1		1					
PIPE(DRYER-CAPI TUBE)	G8F4201100	CU											1			
PIPE(COMP)	G8F4201300	CU	Φ9.52X0.75T	1	1	1	1	1	1	1	1	1	1	1	1	
PIPE（CON-DRYER）	G8F4400101	CU	Φ7.94X0.6T										1			
EVAP COIL	G8F4500102												1			Same As Super Deluxe
CONDENSER COIL	G8R4200201											1		1		Same As Super Deluxe
PIPE(DRAIN-CON)	G8R4200300	CU	Φ9.52X0.6T									1		1		
PIPE(COMP-DRAIN)	G8R4400101	CU	Φ9.52X0.6T									1		1		
EVAP COIL	G8R4500102								1		1	1		1		Same As Super Deluxe
HARNESS RELAY	G2F5100100				1		1									
HARNESS RELAY	G2R5100100			1		1		1		1						
HARNESS RELAY	G8F5100101												1		1	
HARNESS RELAY	G8R5100100								1		1	1		1		
FILTER DRYER	P994100100			1	1	1	1	1	1	1	1	1	1	1	1	Same As Super Deluxe

PARTS LIST FOR M3

Part name	Code	Material	Description	Model												Remark
				R24	F24	R24-2	F24-2	R47	F47	R47-4	F47-4	R72	F72	R72-6	F72-6	
TOP HINGE SPACE	P8F2600100	ABS		2	2	4	4	4	4	8	8	6	6	12	12	
DRAIN HOSE CAP	P8F9900101	RUBBER	BLACK	1	1	1	1	1	1	1	1	1	1	1	1	
COMPRESSOR	G2F5700100		(CAJ 2420Z)		1		1									Same As Super Deluxe
COMPRESSOR	G2R5700100		(HBL 27YE-1)	1		1										Same As Super Deluxe
COMPRESSOR	P2F5700100		(CAJ 2432Z)						1		1					Same As Super Deluxe
COMPRESSOR	P2R5700100		(SK1A1C-L2W)					1		1						Same As Super Deluxe
COMPRESSOR	P5F5700100		(CAJ 2446Z)										1		1	Same As Super Deluxe
COMPRESSOR	P8R5700100		(CAJ 4476Y)									1		1		Same As Super Deluxe

7.REPLACEMENT OF MAIN COMPONENTS

7-1. TOP GRILLE PART

A. Unscrew the screw located on both side of top grille (t) with the top grille (t) fixture.

B. Hold up the top grille (T)

C. Unscrew the screw located on both side of top grille (B).

D. Unscrew the screw located on the cabinet top cover.

E. Pull out the harness display pcb and harness grille door s/w located on back of top grille (B).

You can replace the door switch, mascot, key, front pcb and front pcb case, etc.

7-2. REPLACE DOOR

7-2-1. REPLACE DOOR (M3R24-1,M3F24-1,M3R47-2,M3F47-2,M3R72-3,M3F72-3)

A. Disassemble top grille (T) and top grille (B) as described section 7-1.

B. Unscrew pivot stopper.

C. Unscrew the top hinge (R).

D. Lift the door (R) and pull it out.

E. Replace the door with the new one. (you should assemble pivot middle, hinge spring etc before this process.)

F. Screw the top hinge (L) and pivot stopper. (this process is opposite to disassemble them.)

G. Do just like above instructions in replacing the door (L).

7-2-2. REPLACE DOOR (M3R24-2,M3F24-2,M3R47-4,M3F47-4,M3R72-6,M3F72-6)

A. Disassemble top grille (t) and top grille (b) as described section 7-1.

B. Unscrew pivot stopper. (both top and bottom side)

C. Unscrew the top hinge (L).

D. Lift the door (T) (L) and pull it out.

E. Unscrew the middle hinge (L).

F. Lift the door (U) (L) and pull it out.

Then you can replace new doors and assemble them, those processes are opposite to disassemble them.

G. Do just like above instructions in replacing the door (T)(R) and the door (U)(R).

7-3. REFRIGERATION COMPARTMENT'S PART

- Duct and Lamp
- T-sensor and D-sensor
- Evaporator coil and F-sensor
- Defrost heater (freezer only)
- Evaporator fan motor and fan blade

7-3-1. REPLACE DUCT AND LAMP

A.Disassemble the Duct.

B. Unscrew the screws of lamp cover.

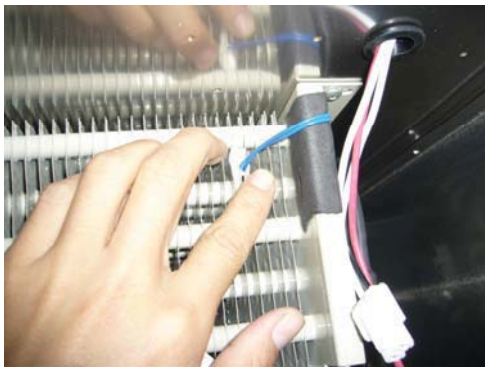
C. Pull out the lamp socket and lamp

You can replace the lamp now.

7-3-2. REPLACE T SENSOR AND D SENSOR (T-SENSOR IS WHITE COLOR, F-SENSOR IS ORANGE AND D-SENSOR IS BLUE)

A.Disassemble the Duct as in 7-3-1

B. Disconnect the connector and pull out the D-sensor from the evap. replace the new one.



(D-SENSOR IS BLUE)

C. Take off the T-sensor from the evap. replace the new one.

(T-SENSOR IS WHITE COLOR)

7-3-3. REPLACE THE EVAPORATOR COIL AND F-SENSER

A. Welding off the connection suction pipe(A) and (B).

B. Unscrew the screw located on back side of evap. housing.

C. Take off the evaporator.

D. Disconnect the connector and Unscrew the screws located on sensor cover and pull out the F-sensor from the evap.sensor guide, replace the new one.

7-3-4. REPLACE THE DEFROST HEATER (FREEZER ONLY)

A. After lift the evaporator up, disconnect the connectors with harness defrost heater and disassemble the defrost fixture spring and split the hooks of the evap..

B. Replace the new defrost heater and fix it with heater fix spring. Connect the connectors.

***NOTE**

Why is always 115 voltage detected between connectors of the evaporator defrost heater in the main harness?

The SNUBBER (located Main PCB) holds two AC power lines simultaneously.
The SNUBBER prevents Main PCB malfunction from sparks occurred by other electrical component's ON/OFF. (SNUBBER =Spark killer)
Because of the SNUBBER, 115 voltage is always detected, but electrical current in this case is very little (small Amps.).So, this electrical current is not enough to operate the evaporator defrost heater.

How to measure the Amps. of the evaporator defrost heater

Disconnect the connectors of the evaporator defrost heater.
Then , prepare the additional Power Source(115V/60Hz) and the Amp. Meter.
Connect the connectors of the evaporator defrost heater to the additional power source and read amp. Value from the Amp. Meter.

7-3-5. REPLACE THE EVAPORATOR FAN MOTOR AND FAN BLADE

A. After lift the evaporator up, unscrew the screw which used in fixing motor fixture.

B. Disconnect the connectors of harness motor.

Then you can replace the evaporator fan motor and fan blade.

REPLACEMENT OF MAIN COMPONENTS

7-4. CONTROL BOX PART

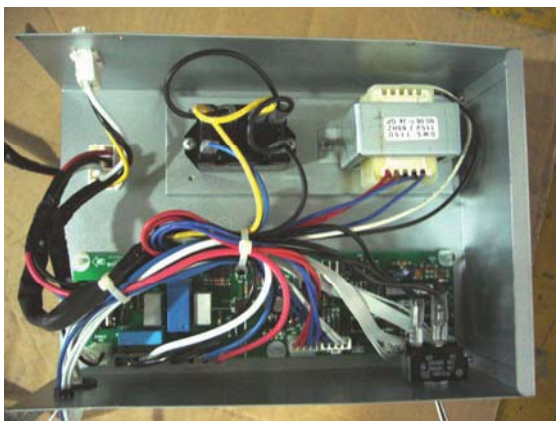
- Power relay
- Transformer
- Main PCB

A. Disassemble top grille (t) as described section 7-1 A B.

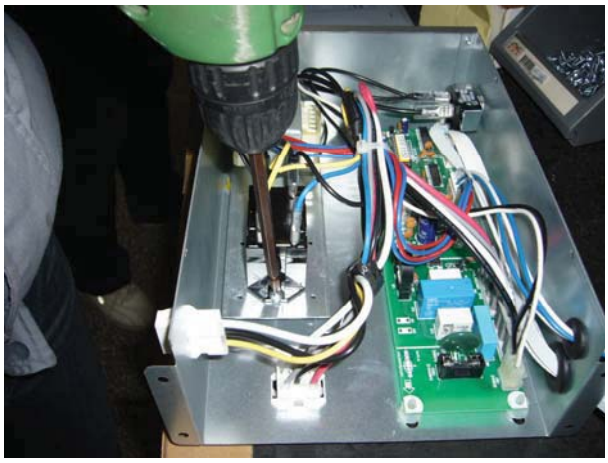
B. Pull out all connectors connected with control box.

C. Unscrew the screws located on front of evap-housing.

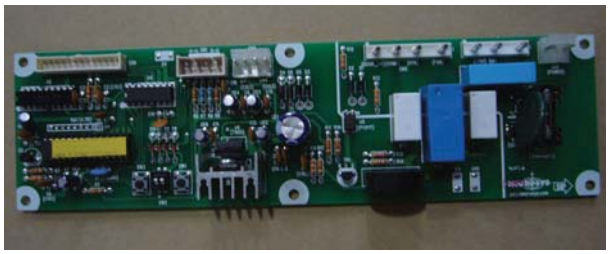
E. Pull out the harness main.



F. Unscrew the screws used in fixing power relay and trans former.



G. Disconnect the main PCB fixture.



Then you can replace the power relay, trans former and main pcb.

REPLACEMENT OF MAIN COMPONENTS

7-5. CONDENSER UNIT

- Compressor
- Condenser fan motor
- Dryer filter
- Pressure switch

The comp. Base is located on both side on the top of the cabinet by screw, and you can replace the Compressor ,Condenser coil Condenser fan motor, ETC. on it.

7-6. REPLACE THE CABINET HEATER AND MULLION HEATER

A. Disassemble the liner frame cover with the and edge of '—'type screwdriver.(left/right/top/bottom side)

B. Disconnect the cabinet heater and pull it out.

You can replace the cabinet heater with the new one.

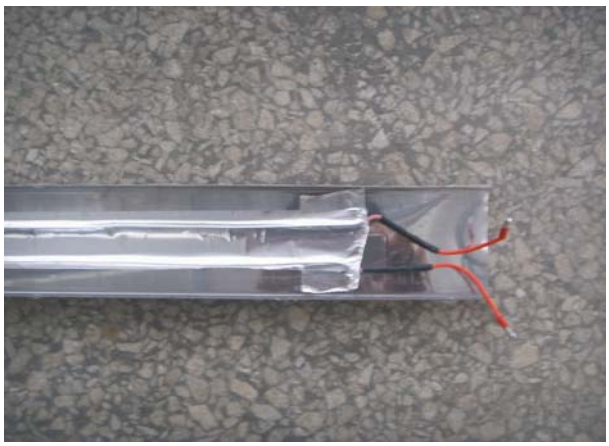
C. Assemble the liner frame cover.(left/right/top/bottom side)

D. Disassemble the mullion frame cover(v) with the and edge of '—'type screwdriver.

E. Unscrew the screw located on both side of the mullion.

F. Take apart the mullion out cover(v) from the mullion, then disconnect the harness mullion heater.

G. Change the old mullion heater(v) and install the new one with the gap between wires 1.2 inch.



H. Insert the mullion out cover(v) into the original position, then screw it on both side of the mullion.(this process is opposite to disassemble the mullion out cover(v))

J. Assemble the mullion frame cover(v).(this process is as alike as assembling the liner frame cover)

K. Do just like above instructions in replacing mullion heater(h).
(PRO-26-2R,PRO-26-2F,PRO-50-4R,PRO-50-4F,PRO-77-6R,PRO-77-6F only, but before replacing mullion heater(h), doors should be disassembled.)

REPLACEMENT OF MAIN COMPONENTS